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Task Order LM00-502 Control Number 08-0038

March 20, 2008

U.S. Department of Energy Office of Legacy Management ATTN: Scott Surovchak Site Manager 11025 Dover Street, Suite 1000 Denver, CO 80021

SUBJECT:

Contract No. DE-AM01-07LM00060, Stoller

Transmittal of the Present Landfill Monitoring and Maintenance Plan and Post-

Closure Plan (PLF M&M Plan) and Rocky Flats Legacy Management

Agreement (RFLMA) Attachment 2 Modification Request

REFERENCE: LM00-502-06-510, Rocky Flats, CO, Site

Dear Mr. Surovchak:

Enclosed is the modified PLF M&M Plan, DOE-LM/1592-2008, dated March 2008, for DOE transmittal to CDPHE for review and approval.

The modification is made to reflect changes to inspection frequencies, completion of certain monitoring requirements that now may be phased out, clarification of vegetation inspection schedules, and completion criteria. The modification also revises the May 2006 PLF M&M Plan text to recognize the implementation of the remedy under RFLMA. Figures 1-1, "Location." Map," and 1-2, "PLF Site Map," were replaced with more current versions, reflecting the postclosure nomenclature and configuration.

Because RFLMA Attachment 2, "Legacy Management Requirements," contains references to the May 2006 PLF M&M Plan, as well as PLF monitoring and inspection criteria, a modification to relevant portions of RFLMA Attachment 2 is also required. Enclosed are the modified RFLMA Attachment 2 replacement pages, dated March 2008, for DOE transmittal to CDPHE for review and approval.

Pursuant to RFLMA, Section 10, -paragraph 66, public notice is required for any modifications of attachments. We will follow the community-notification and Web-posting protocol to provide notice of the modification request and the final CDPHE-approved modification. As documented in Contact Record 2007-08, this modification is not significant and, therefore, does not require a public comment period.

ADMIN RECORD

PD-A-000052



Scott Surovchak Control Number 08-0038 Page 2

If you have any questions regarding the information in this letter or the enclosures, please let me know.

Sincerely,

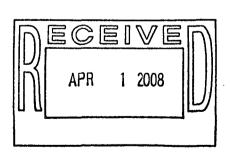
Linda L. Kaiser Project Manager

MGH/abm Enclosures

cc: Correspondence Control File (thru C. Weston/D. Crawford)

Post-Closure Administrative Record?

rc-rocky.flats



ROCKY FLATS LEGACY MANAGEMENT AGREEMENT

• RCRA Wells: Dedicated to monitoring the Present Landfill and Original Landfill.

5.3 Remedy Monitoring and Maintenance

5.3.1 Original Landfill

Groundwater and surface water monitoring details, including criteria and analytes, are listed in Table 2. Table 3 summarizes the inspection and maintenance requirements contained in the *Final Landfill Monitoring and Maintenance Plan, RFETS, Original Landfill*, DOE, 2006, which is incorporated by reference as an enforceable requirement of the RFLMA.

5.3.2 Present Landfill

Groundwater and surface water monitoring details, including criteria and analytes, are listed in Table 2. Table 3 summarizes the inspection and maintenance requirements contained in the approved *Present Landfill Monitoring and Maintenance Plan and Post-Closure Plan*, which is incorporated by reference as an enforceable requirement of the RFLMA.

5.3.3 Groundwater Treatment Systems

Each system will be monitored, at a minimum, for untreated influent and treated effluent, and for impacts to surface water downstream of the effluent discharge point according to the sampling criteria in Table 2 and the decision rules in the attached flowcharts. The systems will be maintained to ensure the effluent meets Table 1 standards.

5.3.4 Residual Subsurface Contamination

The Central OU will be monitored for significant erosion annually and following major precipitation events. DOE will evaluate whether the erosion is in proximity to the subsurface features shown in Figures 3 and 4. Monitoring will include visual observation (and measurements, if necessary) of precursor evidence of significant erosion (cracks, rills, slumping, subsidence, sediment deposition, etc.).

5.3.5 Monitoring Physical Controls

The condition of signs and other physical controls maintained by DOE will be inspected on a quarterly basis.

5.3.6 Monitoring Institutional Controls

The effectiveness of the institutional controls described in Table 4 of this attachment and in the Environmental Covenant will be determined by inspecting the Central OU at least annually for any evidence of violations of those controls. DOE will also annually verify that

Table 2. Water Monitoring Locations and Sampling Criteria

SW GSO1 Woman Creek at Indiana Street SW GSO3 Valant Creek at Indiana Street SW GS11 Pond B-5 outlet SW GS11 Pond A-4 outlet SW GS11 Pond C-2 outlet SW SS31 Pond C-2 outlet SW SW027 SID at Pond C-2 GW 10394 Woman Creek at Indiana Sheet GW 10394 Woman Creek at Indiana Sheet GW 10394 Woman Creek at Indiana Sheet GW 10393 Upgradient GW 10005 Downgradient GW 10005 Downgradient GW 10005 Downgradient	General Objective	Classification	Media	Location ID (1)	Location Description	Frequency	Analytes (4)
SW GS03 Woman Creek at Indiana Street SW GS03 Walnut Creek at Indiana Street SW GS08 Pond B-5 outet SW GS08 Pond B-5 outet SW GS01 Pond C-2 outet SW GS03 N Walnut Creek at end of FC-3 SW GS03 N Walnut Creek at Indiana Street N GW TOS93 N Walnut Creek at Indiana Street N GW TOS93 N Walnut Creek at Indiana Street N GW TOS93 N Walnut Creek at Indiana Street N TO GW TOS93 Deparadent GW TOS93 Upgradent Downgradient GW TOS93 Upgradent Downgradient GW TOS93 Upgradent GW	Points of Compliance (POCs)	のでは、				្រា	A CONTRACTOR OF THE PROPERTY O
SW GS03 Wainut Creek at Indiana Street	4	OC (5)	SW	_			Pu, Am, isotopic U**, flow rate
SW GS03 Walnut Creek at Indiana Siret		The state of the s			-		Pu, Am, isotopic U**, nitrate (pond
SW GS00 Pond 8-5 outlet	<u> </u>	OC (5)	SW	GS03	Walnut Creek at Indiana Street	Flow-paced (varies)	discharges only), flow rate
SW GSS1 Pond A4 oulet	Ā	OC (5)	SW	GS08	Pond B-5 outlet	Flow-paced (varies)	Pu, Am, isotopic U**, nitrate, flow rate
SW GSS1 Pond C-2 outlet	<u>A</u>	OC (5)	SW	GS11	Pond A-4 outlet	Flow-paced (varies)	Pu, Am, isotopic U**, nitrate, flow rate
SW GS10 S. Walnut Creek at B-Series Bypass	ğ	OC (5)	SW	GS31	Pond C-2 outlet	Flow-paced (varies)	Pu, Am, isotopic U**, flow rate
SW GS10 S. Walnut Creek at B. Series Bypass	+ -		1	The second second			では、一般には、一般には、一般には、一般には、一般には、一般には、一般には、一般に
SW GS10 S. Walnut Creek at B-Series Bypass SW SW027 SID at Pond C.2 SW SW027 SID at Pond C.2 SW SW027 SID at Pond C.2 TO GW 10394 Walnut Creek at Indiana Street TO GW 41691 Walnut Creek at Indiana Street TO GW 41691 Walnut Creek at Indiana Street TO GW 41691 Walnut Creek at Indiana Street GW 70193 Upgradient Walnut Creek at Indiana Street GW 70193 Upgradient Walnut Creek at Indiana Street GW 70193 Upgradient Creek at Indiana Street GW 70193 Upgradient Creek at Indiana Street GW 70104 Downgradient Downgradient GW 70105 Downgradient Downgradient GW PLESYSEFF Treatment system effluent System (11) SW PLESYSEFF Treatment system GW PULESYSEFF East Landfill Pond at outlet	: -	A SECTION AND AND ASSESSED.		AND THE PROPERTY OF THE PARTY O	The state of the second of the second	1	Pu, Am, isotopic U**, dissolved Ag and
SW SW027 SID at Pond C-2		OF (6)	SW	GS10	S Walnut Creek at B-Series Bypass	Flow-paced (varies)	Cd, total Be and Cr, flow rate
SW SW027 SID at Pond C-2	And the state of t			and the same reality of the same field as belief the principles with the same same and the same same same same same same same sam			Pu, Am, isotopic U**, dissolved Ag and
SW SW093 N. Wanut Creek at end of FC.3	<u> </u>	OE (6)	SW	SW027	SID at Pond C-2	Flow-paced (varies)	Cd, total Be and Cr, flow rate
SW SW093 N Walnut Creek at end of FC-3 CW 10394 Woman Creek at Indiana Street CW 70193 Upgradient CW 70193 Upgradient CW 70393 Upgradient CW 7005 Downgradient CW 73205 Downgradient System (11)			-		the state of the s	And the same of th	Pu, Am, isotopic U**, dissolved Ag and
7 GW 10394 Woman Creek at Indiana Street 7 GW 10394 Woman Creek at Indiana Street 7 GW 10394 Woman Creek at Indiana Street 7 GW 10393 Upgradient 7 GW 70393 Upgradient 7 GW 70393 Upgradient 7 GW 70393 Upgradient 7 GW 73005 Downgradient GW 73105 Downgradient GW 73105 Downgradient GW 73105 Downgradient GW 73205 Downgradient GW 73205 Below East Landfill Pond GW 73205 Below East Landfill Pond GW 73205 Downgradient GW 80205 Downgradient GW 73205 Downgradient	ď	OE (6)	SW	SW093	N. Walnut Creek at end of FC-3	How-paced (varies)	Cd, total Be and Cr, flow rate
GW 10394 Woman Creek at Indiana Street 7)	1000		200		1		かいいか 日本の理大学の名はないになる
GW 41691 Walnut Creek at Indiana Street	1	1_	NS CM	10394	ŝ	Annual	VOCs, U, nitrate
GW 70193 Upgradient CGW 70205 Downgradient CGW 73205 Downgradient CGW 73205 Downgradient CGW 73205 Downgradient CGW 8206989 Below East Landfill Pond CGW 8206989 Below East Landfill Pond CGW C	B	oundary (7)	36	41691	Walnut Creek at Indiana Street	Annual	VOCs. U. nitrate
CW 70193 Upgradient	CO SOUTH CAME (DI CO CO CO CO CO CO CO CO			The second of th			(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
GW 70393 Upgradient	Present Landini (PLF) Avea (2)		1	20.00	The Colon of the Colonial Section of the Colonial Sect	Ought to the second sec	WOCe motals
GW 70693 Upgradient	ric	CHA(10)	Š	70000	Upgradient	Ousdady	VOCs metals
CW 70053 Downgradient	C ((10) AUG	5	10393	Oppleanem	Course	Work motels
CW 7305 Downgardient	X (0	CHA (10)	3 8	70005	Opgranieni	Quarterly	VOCs motals
GW 73105 Downgradient	<u> </u>	CHA(10)	5	cons	DOWNING CHIEF THE PROPERTY OF	Coareny	VOOS, ITTERIES
GW 73205 Downgradient	Œ	CRA(10)	§	73105	Downgradient	Опапелу	VOCs, metals
GW 4087 Below East Landfill Pond	<u>«</u>	CRA(10)	გ	73205	Downgradient	Quarterly	VOCs, metals
GW B206989 Below East Landfill Pond	₹	OC (7)	8	4087	Below East Landfill Pond	Semiannual	(VOCs, U, nitrate
Seep influent to treatment system South GWISINFNORTH North GWIS influent to treatment system South GWIS influent	A	OC (7)	ŊΘ	B206989	Below East Landfill Pond	Semiannual	VOCs, U, nitrate
Seep influent to treatment system Seep influent Seep inf	The second secon		ļ .				VOCs, isotopic U**, metals,
Septem (11) GW GWISINFNORTH North GWIS influent to treatment system (11) GW GWISINFSOUTH South GWIS influent to treatment system	<u> </u>	reatment System (11)	Š	PLFSEEPINF	Seep influent to treatment system	Quarterly	instantaneous flow rate
Septem (11) GW GWISINFSOUTH South GWIS influent to treatment system		reatment System (11)	ĕ.	GWISINFNORTH	North GWIS influent to treatment system	Discontinued	VOCs, isotopic U**, metals, nitrate
SW PLFSYSEFF Treatment system effluent	1	reatment System (11)	ĕ.	GWISINFSOUTH	South GWIS influent to treatment system	Discontinued	VOCs, isotopic U**, metals, nitrate
SW PLFSYSEFF Treatment system effluent system (11) SW PLFSYSEFF East Landfill Pond at outlet			-			Quarterly, Monthly (if required	
SW PL FPONDEFF East Landfill Pond at outlet	<u> </u>	reatment System (11)	SW	PLFSYSEFF	Treatment system effluent	by decision)	VOCs, SVOCs, isotopic U**, metals
GW P416589 Ubgradient GW P416589 Ubgradient GW 80055 Downgradient GW 80105 Downgradient GW 80205 Downgradient GW 1104 Downgradient GW 11104 Downgradient GW GS05 Woman Creek at west property line (upstream) GW GS59 Woman Creek at west property line (upstream) GW GS59 Woman Creek at west property line (upstream) GW GS05 Source area GW GS05 Source area GW T5699 Downgradient of intercept trench GW MOUND R1-0 Treament system influent GW MOUND R1-0 Treament system influent GW Treament system influent Treament system influe		reatment System (11)	SW	PLFPONDEFF		As required by decision rule	y decision rule
GW P416589 Upgradient GW 80005 Downgradient GW 80005 Downgradient GW 80105 Downgradient GW 80205 Downgradient GW 71104 Downgradient GW 71104 Downgradient SW 6S05 Woman Creek at west property line (upstream) SW 6S05 Woman Creek 700 feet east of OLF (downstream) GW 70897 Source area	Original Landfill (OLF) Area (3)						
GW 80005 Downgradient GW 80105 Downgradient GW 80205 Downgradient GW 11104 Downgradient SW GS05 Woman Creek at west property line (ups tream) SW GS59 Woman Creek 700 feet east of OLF (downstream) GW Towngradient of intercept trench Source area GW Town The Power of the complexity of the compl	Harmon to the party of the part	CRA (10)	85	P416589		Quarterly	VOCs, metals, SVOCs
GW 80105 Downgradient GW 90205 Downgradient GW 11104 Downgradient, downstream SW GS05 Woman Creek at west property line (upstream) SW GS59 Woman Creek 700 feet east of OLF (downstream) GW MOB37 Source area GW 1000 R1-0 Treatment system influent GW MOUND R1-0 Treatment system influent CW MOUND R1-0 Treatment system influent	Ы	CRA (10)	ا.	80005	Downgradient	Quarterly	VOCs, metals, SVOCs
GW 80205 Downgradient GW 71104 Downgradient, downstream SW GS05 Woman Creek at west property line (upstream) SW GS59 Woman Creek at west property line (upstream) GW 700897 Source area GW 15699 Downgradient of intercept trench GW MOUND R1-0 Treatment system influent Treatment system influent Treatment system influent	R	CRA (10)	Αğ	80105	Downgradient	Quarterly	VOCs, metals, SVOCs
SW GS59 Woman Creek at west property line (upstream) SW GS59 Woman Creek at west property line (upstream) SW GS59 Woman Creek 700 feet east of OLF (downstream) GW 00897 Source area GW 15699 Downgradient of intercept trench GW MOUND R1-0 Treatment system influent GW MOUND R1-0 Treatment system influent	Ε.	CRA (10)	ĕ	80205	Downgradient	Quarterly	VOCs, metals, SVOCs
SW GS05 Woman Creek at west property line (upstream) SW GS59 Woman Creek 700 feet east of OLF (downstream) GW **O0897 Source area GW **Is699 Downgradient of intercept trench GW **MOUND R1-0 **Treatment system influent CW **MOUND R1-0 **Treatment system influent	A	OC (7)	₩S	11104	Downgradient, downstream	Semiannual	VOCs, U
SW GS05 Woman Creek at west property line (upstream) SW GS59 Woman Creek 700 feet east of OLF (downstream) GW 700897 Source area GW 15699 Downgradient of intercept trench GW MOUND R1-0 Treatment system influent CW MOUND R1-0 Treatment system influent			-		angul kidirum, manyan sa ina ngayan ngayan ngayan ngayan ngayan ngang ngang ngang ngang ngang ngang ngang ngang	Quarterly, Monthly (if required	
SW GS59 Woman Creek 700 feet east of OLF (downstream) GW 700897 Source area GW 15699 Downgradient of intercept trench GW MOUND R1-0 Treatment system influent CW MOUND R1-0 Treatment system influent	0	LF SW (12)	SW	GS05	Woman Creek at west property line (upstream)	by decision)	VOCs, isotopic U**, metals
SW USSS Worden Creek 700 Feet each OLF (Lownshireanny Control of the Contro					(moothorck) = O to too too too o	Quarterly, Monthly (if required	aledom ** I nipotoni 2001
GW 70087 Source area	J	LF SW (12)	AN .	CODS	Worlian Creek 700 leet east 0! OLF (downstream)	Dy decision)	VOCS, ISOlopic O , Illetais
GW	Mound Site Plume and Treatn	nent System (MSPTS)				THE STATE OF THE S	計画の意味がある。 一日の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本の日本
GW 15699 Downgradient of intercept trench CW MOUND R1-0 Treatment system influent CW MOUND R1-0 Treatment system influent CW MOUND R1-0 Treatment system of fluent CW MOUND R1-0 Treatment system of fluent CW MOUND R1-0 Treatment system of fluent CW CW CW CW CW CW CW C		valuation (9)	<u></u> 8		Source area	Bennial	VOCS
GW MOUND R1-0 Treatment system influent CW MOUND R2-E Treatment system effluent	σ)	entinel (8)	8	15699	Downgradient of intercept trench	Semiannual	VOCs
Treatment exetem offlight		reatment System (11)	8	MOUND R1-0	Treatment system influent	Semiannual	VOCS
OW WOOMD IE E	—	Treatment System (11)	&	MOUND R2-E	Treatment system effluent	Semiannual	VOCS
	Ţ	reatment System (11)	SW	GS10	S. Walnut Creek at B-Series Bypass	Semiannual	VOCs

Table 2 (continued). Water Monitoring Locations and Sampling Criteria

Pre-discharge and a second of the second of	が、中心は 20mmの 20mm 20mm	がはなると	Mar 18 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	がいっている。一般は、これのでは、これがないというないないない。		でいて、おからできる。 では、これでは、これでは、これでは、これでは、これでは、これでは、これでは、これ
	Pre-discharge (13)	SW	A-4	A-Series terminal pond on N. Walnut Creek Prior to routine discharge Pu, Am, isotopic U*, nitrate	Prior to routine discharge	Pu, Am, isotopic U**, nitrate
	Pre-discharge (13)	SW		B-Series terminal pond on S. Walnut Creek	Prior to routine discharge	Pu, Am, isotopic U**, nitrate
	Pre-discharge (13)	SW		C-Series terminal pond in Woman Creek	Prior to routine discharge	Pu, Am, isotopic U**
	,					
Notes					Acronyms and Appreviations	
(1) See Figure 1 for monitoring locations	locations				Ag: silver	
(2) Laboratory analytes are limited to those in the approved Present Landfil	ited to those in the approve	d Present	=	Monitoring and Maintenance Plan and Post-Closure Plan	Am: americium-241	
(3) Laboratory analytes are lin	ited to those listed in Appea	ndix C of th	he Landfill Monitoring and Ma	(3) Laboratory analytes are limited to those listed in Appendix C of the Landfill Monitoring and Maintenance Plan, RFETS Original Landfill	AOC: Area of Concern	
(4) Analysis and evaluation for metals and VOCs will be performed for some	metals and VOCs will be p	erformed f	or some or all of the analytes listed in Table	listed in Table 1	B (followed by numerals): Building (e.g., B371)	ng (e.g., B371)
(5) Results for POCs are evaluated using Figure 5.	nated using Figure 5.				Be: beryllium	
(6) Results from POEs are evaluated using Figure 6.	atuated using Figure 6.				Cd: cadmium	
(7) Results from AOC and Boundary wells and SW018 are evaluated using	andary wells and SW018 are	e evaluate	d using Figure 7.	•	Cr: chromium	
(8) Results from Sentinel wells are evaluated using Figure 8.	are evaluated using Figure	98.			FC: Functional Channel (e.g., FC-2)	7.2)
(9) Results from Evaluation wells are evaluated using Figure 9.	ells are evaluated using Figu	ure 9.			GW: ground water	
(10) Results from RCRA wells are evaluated using Figure 10.	are evaluated using Figure	0			IA: Industrial Area	
(11) Results from Treatment System locations are evaluated using Figure	ystem locations are evaluat	ted using F		 GWISINFNORTH and GWISINFSOUTH may be used for investigative purposes. 	N/A: not applicable	
(12) Results from OLF SW locations are evaluated using Figure 12.	ations are evaluated using	Figure 12.			OLF: Original Landfill	
(13) Results from Predischarge locations are evaluated using Figure 13.	e locations are evaluated us	sing Figure	9 13.		OU1: Operable Unit 1	
* Samples of ground water collected for Pu and Am analysis will be filtered	lected for Pu and Am analy:	sis will be	filtered in the field using a 0.45 um in-line filter.	45 um in-line filter.	PLF: Present Landfill	
** Isotopes U-233,234; U-235; U-238	U-238				POC: Point of Compliance	
					POE: Point of Evaluation	
					PU&D: Property Utilization and Disposal	Jisposal
					Pu: plutonium-239,240	
					RCRA: Resource Conservation and Recovery Act	and Recovery Act
					SID: South Interceptor Ditch	
					SPP: Solar Ponds Plume	
					SVOCs: semi-volatile organic compounds	spunodw
					SW: surface water	
					U: uranium	
					VOCs: volatile organic compounds	ds

Table 3. Present and Original Landfill Inspection and Maintenance Requirements

			4	
Requirement	Description of activity	Frequency	Documentation/Reporting	Exit strategy
Final cover inspection and	 inspect/monitor slope stability, 	 quarterly (settlement and - 	 conditions affecting 	Consultative process
monitorina	soil cover	stability monuments	effectiveness of landfill cover to	or periodic CERCLA
	 visually inspect surface of 	annually); evaluate frequency	be reported per note 1 below	review
	landfill cover for cracks,	during CERCLA periodic	 document on inspection 	Vegetation monitoring
	depressions, heaving, and	review	checklist; submit to parties	performed until PLF
		 additional weather-related 	within one month of inspection;	M&M Plan grassland
	- monitor settlement	inspections within 2 days after	include in quarterly and annual	success criteria are
	monuments and side slope	storm event of one inch or	reports	met
	stability monuments	more of rain in a 24-hour		
	- vegetation monitoring	period or significant melt of		
		10-inch or more snowstorm		
		 Monthly for noxious weeds 	•	
		during growing season (April-	•	
		Sept.). Annually for		
		vegetation		
Inspection and monitoring of	- Visually inspect stormwater	- monthly for first year;	conditions affecting	- Consultative process
stormwater management system	management structures	evaluate frequency during	effectiveness of landfill cover to	or periodic CERCLA
and erosion control features			be reported per note 1 below	review
	on control		 document on inspection 	
	features (perimeter channels	inspections within 2 days after	checklist; submit to parties	
	and natural drainages); and	storm event of one inch or	within one month of inspection;	
	seep treatment system	more of rain in a 24-hour	include in quarterly and annual	
		period or significant melt of	reports	
		10-inch or more snowstorm		
GW monitoring	n Table 2, Figure 1, and	n Table 2, Figure 1, and	n Table 2, Figure 1, and	Included in Table 2,
	Figure 10	Figure 10		Figure 1, and Figure 10
Landfill seep and pond monitoring	Included in Table 2, Figure 1; and	in Table 2, Figure 1, and	Included in Table 2, Figure 1, and	Included in Table 2,
	Figure 11	Figure 11	Figure 11	Figure 1, and Figure 11
Maintenance and repairs	Perform minor or major repairs as	- as needed	P P	Consultative process or
	needed; for major damage or		port on	periodic CERCLA review
	repairs, consult with parties and		inspection form	
	develop appropriate actions for		 conditions affecting 	
	approval by CDPHE	,	effectiveness of landfill cover to	
			pe reported per note i pelow	:
Institutional and physical controls	Fence around perimeter of Central		tailure of physical controls to be Consultative process or	Consultative process or
	OU, signs at entry points to		reported per note 1 below	periodic CERCLA review
	Central OU, warning signs in		be per pote 2 below	
	accordance with 6 CCH 1007-3		me her riore z nerow	-